



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,815	09/26/2001	Robert P. Benjey	01-ASD-109 (GT)	1163

200 7590 07/16/2003
EATON CORPORATION
EATON CENTER
1111 SUPERIOR AVENUE
CLEVELAND, OH 44114

EXAMINER

RIVELL, JOHN A

ART UNIT	PAPER NUMBER
----------	--------------

3753

DATE MAILED: 07/16/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,815

Applicant(s)

BENJEY, ROBERT P.

Examiner

John Rivell

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/9/03 (amendment & drawings).
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Applicant's arguments filed June 9, 2003 have been fully considered but they are not persuasive.

Claims 1-11 remain pending.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed in instant figure 5 of the application in view of Allison. The prior art as disclosed in instant figure 5 of the application discloses all the claimed features, including the claimed "liquid seal" formed by the close proximity of the outside of the fuel nozzle with the internal diameter of the fill neck 4a, with the exception of having in the fuel cup 5a a mechanical nozzle seal sealing the inserted fuel nozzle 3a from atmosphere as well as a relief valve bypassing the mechanical seal about the nozzle 3a. The patent to Allison discloses, in figure 8 for example, that it is known in the art to employ a fuel filler neck 202 that includes a nozzle seal 212 mounted upon a support plate 210, which plate 210 includes mounted thereon a pressure relief valve 102 and a vacuum relief valve, not shown (column 8, lines 27-60), the seal 212 sealing the periphery of an inserted fuel nozzle "N" for the purpose of sealing the open end of the fill neck 202 and nozzle "N" thus precluding straight venting of fuel vapor to the atmosphere. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the fill cup 5a of instant figure 5 of the application a support plate having mounted thereon a seal element for supporting and sealing the fuel filler nozzle and a relief valve to relieve overpressure in the cup 5a for the purpose of sealing the open end of the fill neck 202 and nozzle "N" thus precluding

Art Unit: 3753

straight venting of fuel vapor to the atmosphere as recognized by Allison. Also included in Allison is a downstream valve element 82 operable by nozzle insertion. The remaining limitation are considered to be clear from instant figure 5 of the application.

Regarding applicants remarks concerning the above, the argument that the combination of references fails to demonstrate the claimed invention, which "utilizes both a mechanical seal and a liquid seal about the nozzle to facilitate entrainment of vapor for recirculation into the fuel tank", by reason that a) the system of Allison uses only a mechanical 212 about the fuel neck and that b) the system of prior art figure 5 "does not use a mechanical seal about the nozzle but shows the lower end of the filler neck restricted about the nozzle" is unpersuasive in view of the respective knowledge demonstrated by each reference.

For example, the prior art of instant figure 5 includes the claimed "liquid seal" and in fact recirculates some fuel vapor back into the fuel tank. See the specification, page 4, lines 13-17 wherein it is specified that during filling of the tank with liquid fuel,

"the aspirating effects of the liquid fuel flow from the nozzle creates a reduced pressure in the upper end of the tube 5a and draws in air and vapor from 13 a into the filler tube 4a and the tank."

The prior art of instant figure 5 does not include the claimed "mechanical seal".

The prior art to Allison discloses, in figure 8, a fuel filler neck 14 inclusive of a mechanical nozzle seal 212. Additionally shown therein, but described in the patent specification with respect to figure 4, is a port 99, connecting the fuel neck chamber 89 with the vapor signal line 24. As disclosed at column 5, line 48 through column 6, line 3, specifically at column 5, through column line 3:

"a port 99, located within interior chamber 89, is provided for fluidly interconnecting a second end of nozzle signal line 24 to fill pipe 14.

As such, fuel vapors confined within vapor dome 34 and signal line 24 are likewise inhibited from evaporative release to the atmosphere. Port 99 is operatively located such that as the fuel level in fuel tank 12 approaches the 'fill line', the rushing vapors pick up and carry liquid fuel through nozzle signal line 24. This 'spray' signals the nozzle shut-off mechanism to terminate the delivery of fuel into fill pipe 14 in a known manner."

Clearly then, as liquid fuel is received by the tank, vapors, above the fuel level in the tank are conducted through signal line 24 to port 99 in the filler neck. During refilling, any aspiration effect caused the inflow of fuel from the nozzle within filler neck 14 downstream of the mechanical seal 212 in chamber 89 will cause fuel vapor, and perhaps some liquid fuel as a "spray", conducted to port 99 to be aspirated within the inflow of liquid fuel and be recirculated back into the tank as recited by the claims at issue.

Accordingly, it is believed that Allison does in fact suggest to one of ordinary skill in the art the modifications called for by the claims over the prior art of figure 5 and that it would have been obvious to one of ordinary skill in the art to employ in the fill cup 5a of instant figure 5 of the application a support plate having mounted thereon a seal element for supporting and sealing the fuel filler nozzle and a relief valve to relieve overpressure in the cup 5a for the purpose of sealing the open end of the fill neck 202 and nozzle "N" thus precluding straight venting of fuel vapor to the atmosphere as recognized by Allison.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

Art Unit: 3753


TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Rivell whose telephone number is (703) 308-2599. The examiner can normally be reached on Monday –Thursday between 6:30am and 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Bertsch can be reached on (703) 308-0975. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

j.r.
July 16, 2003


John Rivell
Primary Examiner
Art Unit 3753